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AD-A197 192

U.S. Armed Forces and the Operational Level of War--Are We Prepared to Win?

by
Major Henry S. Scharpenberg
Armor

School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

6 May 1988

88-2948

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited.
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION School of Advanced Military Studies, USAC&GSC 6b. OFFICE SYMBOL (*If applicable*) ATZL-SWV	7a. NAME OF MONITORING ORGANIZATION
6c. ADDRESS (*City, State, and ZIP Code*) Fort Leavenworth, Kansas 66027-6900	7b. ADDRESS (*City, State, and ZIP Code*)
8a. NAME OF FUNDING/SPONSORING ORGANIZATION 8b. OFFICE SYMBOL (*If applicable*)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (*City, State, and ZIP Code*)	10. SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO. / PROJECT NO. / TASK NO. / WORK UNIT ACCESSION NO.

11. TITLE (*Include Security Classification*)
U.S. Armed Forces and the Operational Level of War--Are We Prepared to Win? (U)

12. PERSONAL AUTHOR(S)
MAJ Henry S. Scharpenberg, USA

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (*Year, Month, Day*)	15. PAGE COUNT
Monograph	FROM _____ TO _____	88/5/6	51

16. SUPPLEMENTARY NOTATION

17. COSATI CODES			18. SUBJECT TERMS (*Continue on reverse if necessary and identify by block number*)
FIELD	GROUP	SUB-GROUP	operational art; joint operations; operational level of war; U.S. force structure

19. ABSTRACT (*Continue on reverse if necessary and identify by block number*)

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The final portion of the paper compares current U.S. force structure and doctrine with the model to ascertain whether we understand operational art and are prepared to wage war successfully at that level. The monograph concludes that there are significant shortcomings in our ability to be successful at the operational level, and it provides recommendations for the correction or mitigation of these shortcomings.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT ☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☐ DTIC USERS	21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED
22a. NAME OF RESPONSIBLE INDIVIDUAL MAJ Henry S. Scharpenberg	22b. TELEPHONE (*Include Area Code*) (913) 684-2138 22c. OFFICE SYMBOL ATZL-SWV

DD Form 1473, JUN 86 *Previous editions are obsolete.*

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School of Advanced Military Studies
Monograph Approval

Name of Student: Major Henry S. Scharpenberg
Title of Monograph: U.S. Armed Forces and the Operational Level of War--Are We Prepared to Win?

Approved by:

James R McDonough
Lieutenant Colonel James R. McDonough, M.S. — Monograph Director

L. D. Holder
Colonel L.D. Holder, M.A. — Director, School of Advanced Military Studies

Philip J. Brookes
Philip J. Brookes, Ph.D. — Director, Graduate Degree Programs

Accepted this 20th day of May 1988.

ABSTRACT

U.S. Armed Forces and the Operational Level of War--Are We Prepared to Win? by MAJ Henry S. Scharpenberg, USA, 47 pages.

This monograph examines the operational level of war, a concept rediscovered by the United States Army with the publication of the 1982 version of FM 100-5 and reinforced by the appearance of the succeeding version in 1986. Military doctrine and theory is examined to determine what components and conditions constitute operational level warfare. A paradigm of operational level war is proposed and compared to U.S. military experience in World War II, Korea, and Vietnam to establish the key theoretical aspects of operational art that were present or absent in each historical example.

The final portion of the paper compares current U.S. force structure and doctrine with the model to ascertain whether we understand operational art and are prepared to wage war successfully at that level. The monograph concludes that there are significant shortcomings in our ability to be successful at the operational level, and it provides recommendations for the correction or mitigation of these shortcomings.

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I. INTRODUCTION

The operational level of war is a concept rediscovered by the United States Army with the publication of the 1982 version of FM 100-5 and reinforced by the appearance of the succeeding version in 1986. Nonetheless, after eight years of emphasis upon rebuilding the defense establishment of the United States and more than two trillion dollars of increased spending on defense budgets, considerable debate continues as to how ready the Department of Defense is to wage war successfully at the operational level.

The performance of U.S. armed forces in recent years has given numerous members of Congress and so called "defense reformers" reason to question whether or not the Department of Defense understands what the operational level of war entails and what is required to win a conflict at that level. Defense critics such as Edward Luttwak review the seemingly divergent techniques and procedures of the Army and Marine Corps units committed to combat in Grenada and cite their performance as perfect examples of our inability to operate in a joint environment.[1] Other critics, exemplified by William Lind, examine our preoccupation with the tactical level of war to the exclusion of all others as further proof of our operational weakness.[2] Still other reformers look at the professed strategy and organizational arrogance of the Navy and wonder if it is prepared, or even capable, of acting in unison with the other services. If these critics are correct and our Armed Forces are not prepared to fight at the operational level of war, then we will be at risk if called upon to fight an enemy such as the Soviets who do understand that level of

conflict.

This paper will examine military doctrine and theory to determine what components and conditions constitute warfare at the operational level. A model on the composition of warfare at the operational level will be proposed for further analysis and comparison to wartime experience. Examination of the model will view recent U.S. military experience in World War II, Korea, and Vietnam. The intent will not be to summarize the military histories of those conflicts as much as it will be to glean the key theoretical aspects of operational art present or conspicuously absent in each case.

Once the model has been established, and its components held up to historical experience, the final section of the paper will compare current U.S. force structure and doctrine with the model to ascertain whether we understand operational art and are prepared to wage war at that level successfully. If shortcomings exist, recommendations for their correction or mitigation will be proposed.

II. WHAT IS THE OPERATIONAL LEVEL OF WAR?

The best point of departure for a discussion of the operational level of war is the 1986 version of FM 100-5 Operations. As the basis for the Army's resurgent interest in the operational level of war, this field manual provides an in-depth examination of the topic and its integral subcomponent, operational art. Although not specifically defined by FM 100-5, the operational level of war may be viewed as the level of violence at which battles and engagements are orchestrated to produce cumulative results which establish the pre-conditions for

success at the strategic level of war. Operational art defines how that orchestration is achieved. FM 100-5 is more precise on this point and defines operational art as "the employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations."[3] Additionally, FM 100-5 explains that operational art involves fundamental questions such as when and where to accept battle, and how to attack and defeat the enemy's source of strength and power. This latter concept is known more commonly as attacking the enemy's center of gravity, and figures prominently in the waging of operational level warfare.

Applying operational art is a challenging undertaking. It requires leaders who have the vision to see the entire theater of operations and how potential battles and engagements may influence it. They must also anticipate requirements based upon military and political considerations, understand the interrelationship of ends and means, and operate efficiently in joint and combined environments. Operational level commanders must key military requirements to the attainment of political or strategic goals. They must understand what actions to promulgate to attain goals, and how to apply the limited forces available to achieve the stated ends.

This sequencing of actions and distribution of resources is accomplished most commonly by a campaign plan. In attempting to define large unit operations, FM 100-6 Large Unit Operations describes a campaign plan as one which "synchronizes land, sea, and air effort. It does this principally by establishing command

relationships between the commander and his land, sea, and air component commanders and the commanders of other assigned commands."[4] In reality, the campaign plan does more than establish command relationships among assigned forces. It establishes long term goals for the assigned force. It also orients friendly forces on the enemy's center of gravity, and spells out in sufficient detail how that center of gravity is to be defeated. Simply stated, it translates strategic requirements into operational instructions for the military application of force.

Campaign, or operational level, planning begins when the theater commander receives guidance from the National Command Authority (NCA) through the Joint Chiefs of Staff (JCS). Campaign planning determines when and where to fight, how to exploit tactical actions, and how to synchronize the entire spectrum of military and non-military actions in pursuit of the theater objectives. Although the plan provides direction for all subordinate and component forces, it is usually constrained by NCA guidance. Operational planners take the strategic guidance and establish ends and means for the campaign. Ends visualize a political or military objective to which all military and political action is directed. The means represent the total combat power available to a commander and include sustainment capability, personnel and materiel available, the theater of operations assigned, time available to complete the mission, and such intangible factors as leadership, state of training, and morale of soldiers. The operational level commander must establish the military conditions which are required to achieve the strategic aims. In a conventional war, this usually will mean

the destruction of the enemy force or his ability to resist. In a low intensity or unconventional war, military conditions will be harder to determine and attain. In such instances, the enemy's center of gravity will be more difficult to define and consequently harder to attack.

The natural tension between offensive and defensive action creates a further complication which characterizes operational level warfare. The point at which the balance of strength is reached between an attacking force and its opponent is defined as the culminating point. A vital consideration for an operational commander during a campaign is sensing his own culminating point so that he can defeat the enemy before reaching it.[5] Such a time or force sensitive decision creates a danger for the commander who cannot adequately balance his ends and means. The inability to balance immediate and long term operational requirements will result in a tension between combat and sustaining resources that may force the campaign to culminate before victory can be achieved.[6]

Specific capabilities and requirements are fundamental to the conduct of operational art. These prerequisites cross the boundaries of service components and the levels of warfare, and clearly delineate the ability to practice war successfully at the operational level.

The first discriminator of the operational art is the ability to project operational level fires. Operational fires have three primary tasks. First, they facilitate the maneuver of friendly forces to the operational depths of the battlefield by creating gaps in the enemy's defenses. Second, they set the terms for

successive battles by interdicting and destroying reinforcing enemy combat echelons and their logistic support in theater. Finally, they destroy the enemy's ability to perform critical battlefield functions and use key facilities that may have operational level significance.[7] Operational fires, by design, have a decisive impact on the conduct of a campaign or major operation and must be capable of delivery throughout the depths of the battlefield. During World War II, massed tactical and strategic bombers based in England were used to create a penetration in the German defenses in Normandy during Operation COBRA. Patton's Third Army passed through the penetration and advanced to the Franco-German border before it was halted by supply problems in September, 1944. The employment of massed airpower in COBRA was a good example of operational fires having decisive impact on the conduct of the ground campaign. Providing such fires has traditionally been the responsibility of tactical air support. As surface to surface missiles are developed with greater accuracy, range, and economies, however, they will augment (if not replace) TAC AIR as the principal source of operational fires.

The ability to create a deception at the operational level is equally critical to operational art. Such deception will require careful coordination and assistance from national, and when appropriate, combined strategic intelligence assets. Human intelligence (HUMINT), electronic intelligence (ELINT), and counterintelligence capabilities will be important components of operational deception. Operation FORTITUDE, the deception operation designed to convince Hitler that the 1944 D-Day invasion would be directed at the Pas de Calais, is an excellent example of

operational level deception waged by US Armed Forces as part of a greater Allied effort. FORTITUDE employed extensive use of dummy facilities to confuse German reconnaissance aircraft, phoney headquarters to transmit simulated operational radio traffic, and Allied counterintelligence agents to provide doctored information to German spies. In an era of constrained resources, however, it will be difficult to sustain the personnel and equipment costs of such a large scale deception. Extremely accurate satellite reconnaissance platforms and signal intelligence capabilities will make it difficult, if not impossible, to hide large forces. Consequently, future deception activies must be geared toward masking the operational intent rather than the capabilities of a force.

While deception will allow us to mask our intent from the enemy, operational level intelligence must provide an accurate portrayal of the enemy's intent. Orienting on larger enemy air, sea and land units, and covering the entire theater of operations, operational intelligence must view the enemy situation in its entirety. It must probe the mind of the enemy commander and examine the political, economic, and technological factors that may impact upon his decision making process. Field Manual 100-6 outlines several key tasks of operational level intelligence. First, it must develop the situation to include intelligence preparation of the theater of operations, threat area evaluation and analysis, and determination of the threat's center of gravity. Second, it must aid the operational commander in target development by templating appropriate military, strategic, and political factors as well as threat command styles to produce an

accurate picture of his center of gravity and the decisive points whereby it can be attacked. It must assist in the security of the friendly center of gravity, unmask enemy deception, and help screen friendly intent and plans from enemy interception. Finally, it must provide adequate indications and warning of enemy hostile action. The attainment of such intelligence capabilities will require a heavy reliance upon strategic level intelligence assets such as the Central Intelligence Agency (CIA) and the National Security Agency (NSA).[8]

Logistics, which is always a critical element of combat power, assumes an even greater level of importance at the operational level. Defined as operational sustainment, it includes those logistics and support activities required for campaigns and major operations in a theater of war. In the future, campaigns may be limited more by sustainment constraints than they are by operational requirements. This is due in part to the nature of modern armies whereby large numbers of highly technical and diverse types of equipment are employed over extended areas without the benefit of extensive maintenance and support facilities. Loss rates of such equipment in combat, as typified by the 1973 Arab-Israeli War, will be extremely high and will serve as a severe limiting factor. It is entirely possible that the sustainment structure of the operational level command could be its center of gravity and extremely vulnerable to enemy interdiction or destruction.[9] Operational level sustainment will require support to the theater throughout all phases of the operation. Depending on the location of the theater of operations, this may necessitate simultaneous employment of ground lines of communication (LOC), air lines of communication (ALOC),

and sea lines of communications (SLOC). In such instances, the primary limiting factors on the operational commander's freedom of action will be the availability of transportation assets and his ability to protect friendly lines of communication from enemy action.

The operational level reserve is another key ingredient of operational art. It must be of sufficient size and capability to effect decisive outcome in the theater when employed. In the offense, this might entail a force of sufficient size to penetrate to operational level depth or to establish favorable conditions for the next battle. In Europe, NATO forces would likely view the Soviet Front as the focus of their operations. Employment of a NATO operational reserve would seek to inflict sufficient damage upon WARSAW PACT forces to cause the Front commander to change his mission or priorities. To do so, the operational reserve would have to destroy one combined arms army (consisting of 3-5 divisions) and possibly defeat another.[10] The minimum force for this would be 3-5 heavy divisions. In a situation where friendly forces were not outnumbered in the theater of operations, or enjoyed a significant mobility advantage over the enemy, a smaller operational reserve would be sufficient.

Equally important is the commander's knowledge of when and where to employ the reserve, and the authority to do so in the hands of the appropriate commander. MacArthur's operational reserve during the early days of the Korean War was X Corps commanded by General Almond. When committed at Inchon, it routed the North Korean People's Army and demonstrated that MacArthur clearly understood the operational effects of the reserve.

Command and control and leadership at the operational level are equally critical. The inherently joint nature of campaign planning and direction makes mutual understanding and thorough cooperation all the more important in theater operations. Successful command and control requires mission type orders, anticipation of future requirements, and initiative at all levels in order to focus what might otherwise be slow moving and unresponsive larger units. The caliber of leadership and command and control displayed by Field Marshal Erich von Manstein when he destroyed the Soviet Kharkov offensive with numerically inferior forces in February 1943 will not be enough in itself for future U.S. operational commanders. The relatively small size of our armed forces, coupled with the diversity of possible contingencies, dictate that future operational level forces must be truly "joint", capable of working together and responsive to a single commander regardless of service affiliation. Some Army publications go so far as to suggest leadership at the operational level must include the skill to "effectively gain consensus in the decision process particulary as it applies to the joint and combined level."[11] While this has historical precedent for combined operations, it may prove counterproductive as consensus building for joint operations could diametrically oppose the principle of unity of command with severe consequences for the operational effectiveness of the force.

Synchronization is one of the four tenets of Airland Battle and equally important for operational art. Operational level commanders establish favorable conditions for battle by coordinating all elements under their command and attacking the enemy throughout the assigned area of operations. The resources

available must be synchronized carefully in complementary and reinforcing fashion so as to maximize the combat power available. Ground operations, which normally will comprise the major element of operational maneuver, must be synchronized in turn with operations conducted by the air and sea components. This is especially important for the air campaign which must be an adjunct of the ground maneuver plan and not conducted in isolation. Furthermore, extensive ground operations require friendly commanders to move large units in a coordinated and efficient manner. This capability requires significant traffic control, air defense, deception, and logistical support for success. Synchronization of those assets will tax the planning staff and its commander severely.

Operational maneuver is an integral portion of the operational art. "Maneuver means moving and acting consistently more rapidly than the opponent, and more rapidly than his expectations."[12] Operational maneuver concerns itself with the Jominian concept of lines of operations or strategic access. The commander must determine where he will direct the bulk of his armed forces to create the battle conditions necessary for the defeat of the enemy armed forces or the seizure of physical objectives that are his sources of power. It requires the operational commander to determine whether he must operate on interior or exterior lines, and whether he has adequate command and control means and sustainment to do so.[13]

The final component of the operational art is the use of the indirect approach. This tactic applies friendly strength against enemy weakness to achieve the best outcome at least risk. It

assumes correct determination of the enemy center of gravity, and identification of decisive points where friendly strength can be directed against enemy weakness.[14]

A common question of the operational level of war is at what level of command does it apply? Field Manual 100-5 does not designate any particular echelon of command as solely or uniquely concerned with operational art. It suggests that "corps are the instruments whereby higher levels of command conduct operational level maneuver."[15] This, however, is situation dependent. In Europe, army groups and the regional headquarters controlling them are considered to be operational headquarters and their component corps are viewed as tactical formations. In comparison, it is useful to examine how the Soviet Union organizes its forces for operational level war as it or one of its surrogates will likely be our adversary.

The Soviet Union employs Theaters of Military Operation (known by the Soviet acronym TVD) as the focus for operational planning.[16] The TVD orchestrates and controls theater wide operations within its assigned area and supervises all subordinate formations. These include fleets, fronts, independent armies, and flotillas. The front is the largest wartime formation. It is an operational and administrative unit which could be composed of three to five combined arms armies with their supporting arms, as well as assigned aviation and special purpose forces.[17] All fixed wing aircraft and helicopter assets that provide support to ground forces are subordinate to the front. This is in direct contrast to close support and some battlefield aerial interdiction (BAI) aircraft in our structure that remain under control of the Air Force.

The Soviets consider fronts and independent armies (where required) to be operational level units. Although no particular-sized unit in the U.S. force structure is considered to be a prerequisite for the operational level of war, the majority of recent writings claim operational art to be the domain of at least corps commanders. The level of operational war is best determined by identifying which commander has responsibility for operations in the theater. This could be an Army officer at any one of a number of levels of command (e.g. division, corps, brigade task force), a Marine Expeditionary Force commander, or a Navy task force commander. Conceivably, an Air Force officer could be assigned as the operational level commander.

In summary, operational art is a complex process that sequences major operations and campaigns in a theater of war or a theater of operations to attain strategic goals. It requires capable, joint forces that can be sustained operationally and that can practice deception on an operational level, conduct operational level maneuver, and discern enemy intentions and capabilities while simultaneously masking its own. The forces must possess a suitable reserve and be capable of projecting operational fires throughout the area of operations. Finally, its leadership must be capable of synchronizing the employment of large and varied joint forces using either a direct or indirect approach that emphasizes initiative and mission-type orders. With this as a model for comparison, let us examine how U.S. wartime experience compares with theory.

III. THE WORLD WAR TWO EXPERIENCE

The United States involvement in the Second World War represents the last time in our history when the resources of the nation were committed fully to the waging of war. As such, it is an ideal model to study for an appreciation of the operational art. In terms of sequencing major campaigns and operations for the attainment of strategic goals, neither the British nor the Americans developed a comprehensive strategy. American strategy, and the concomitant goals that delineated operations and campaigns, was a compromise between British peripheral strategy and the American principle of concentration.[18] The direct thrust against the German center of power and strength, favored by the Americans, was delayed by a series of ancillary operations in North Africa and the Mediterranean preferred by Churchill and the British General Staff. This was primarily a result of coalition warfare rather than a fundamental flaw in understanding operational art. As the war progressed, American strategic thinking became increasingly sophisticated. Its scope broadened from individual operations to groups of operations and the various permutations and combinations such groupings entailed.[19] This could reasonably be termed operational art.

American war potential could not overwhelm the three Axis partners (Japan, Germany, Italy) simultaneously. Limited resources demanded the concentration of forces against one enemy at a time. The shorter lines of communication across the Atlantic Ocean (as compared to the Pacific), and strategic agreement reached between President Roosevelt and Prime Minister Churchill prescribed concentration in the Atlantic theater of operations

against the Germans. Such concentration was not achieved, however, as Japanese advances drained resources away from the "Germany-First" strategy. As U.S. forces poured into the Pacific theater, their momentum generated its own strategy and the result was a Central Pacific offensive. By 31 December 1943, 1.8 million personnel, 17 Army divisions, 8,800 aircraft, and 515 warships were dedicated to the European theater while the Pacific theater received 1.9 million personnel, 16 and 1/2 Army and Marine divisions, 7,900 planes, and 713 warships.[20] U.S. planners were unable to concentrate forces in either the European or Pacific theater. Within the Pacific theater, resources were divided further between the South West Pacific Area (SWPA) counteroffensive commanded by General MacArthur and the Central Pacific drive commanded by Admiral Nimitz.

In the Pacific, U.S. efforts focused initially on the destruction of the Japanese Navy. Following the crippling of the Imperial Navy's carrier aviation arm at the Battle of Midway Island in June 1942, ground operations were conducted to secure advanced bases for land-based aviation which would ultimately be directed against the Japanese home islands. After the bloody battles of Buna-Gona in 1943, General MacArthur quickly surmised that amphibious operations and naval supremacy provided superior operational mobility which could defeat the Japanese Army by isolation and starvation rather than confronting it everywhere in the South Pacific.

Once American forces entered the continent of Europe, however, they failed to focus on the enemy center of gravity, the German Wehrmacht. In July 1944 Allied planners were given the opportunity to destroy German Army Group B following the breakout

of forces in Operation COBRA. Rather than take advantage of superior mobility and mastery of the air to encircle and destroy the disorganized German forces, American units maintained their focus on the Channel ports, a focus mandated by the OVERLORD plan that allowed the majority of Army Group B to escape destruction. The lack of focus by the Allies on the Wehrmacht as the center of gravity precluded annihilation of German armies recklessly exposed by counterattacks ordered by Adolf Hitler at Falaise-Argentan and the Ardennes.

Unity of effort by joint forces, however, was not evident. As early as 1903, truly joint forces had been envisioned when President Theodore Roosevelt created the Joint Board of the Army and Navy to handle all matters regarding cooperation of the two services.[21] Nonetheless, forty years later the goal of jointness had not been achieved. At certain levels of command in World War II, jointness was exercised as a matter of tactical convenience, such as the cooperation between General Patton's Third Army and the Ninth Tactical Fighter Command led by General Quesada. However, at the operational level, deployed forces seldom were united under one commander. Within the European theater, unity of command did not occur habitually below the level of Supreme Headquarters, Allied Powers Europe (SHAPE).

The Pacific theater provided a further illustration of the lack of jointness. The invasion of the Philippine Islands was scheduled for October 1944. General MacArthur was designated as Supreme Allied Commander of the invasion forces while Admiral Halsey, Commander of the Third U.S. Fleet, was directed to coordinate his operations with MacArthur while remaining

accountable to Admiral Nimitz, Commander-in-Chief of the Pacific Ocean Area. The ambiguity in command structure nearly caused a catastrophic defeat to U.S. invasion forces when the Japanese Navy counterattacked in the Battle of Leyte Gulf. Halsey fell for a Japanese diversion and sent his fleet northward against Japanese aircraft carriers, away from the U.S. invasion fleet whose protection was his primary mission. This action was taken without informing General MacArthur, much less seeking his approval. When the main enemy battle fleet approached the now unprotected invasion transports, it was engaged by small escort carriers and destroyers instead of Halsey's fast battleships and fleet carriers. At the Battle of Leyte Gulf, the disastrous consequences of split command were averted only by the courage of American soldiers and sailors, and the inexplicable timidity of the normally aggressive Japanese fleet. In both the European and Pacific theaters, American fighting abilities would have to compensate for the lack of effective, joint forces.

Throughout World War II, American forces demonstrated their ability to practice effective deception at the operational level. Operation FORTITUDE totally deceived the Germans as to the location of the D-Day invasion.[22] Similar deception operations confused Japanese planners as to the location and timing of repeated island invasions in the Pacific. Just as important, U.S. intelligence officers were superb in discerning the intent of our enemies. In the European theater, intelligence provided by ULTRA enabled the Allies to read German strategic and, in many cases, tactical communications, and greatly facilitated the conduct of the war in that theater.[23] A similar capability existed with MAGIC which allowed U.S. planners to read the Japanese Purple Code

and consequently ambush the Japanese fleet at Midway Island, intercept and kill Admiral Yamamoto (Japanese Commander-in-Chief) in April 1943, and neutralize the Japanese submarine fleet by air and naval action.[24] Eventually, reliance on these communications intercepts lulled us into overconfidence, enabling enemy forces during the Battles of the Bulge and Leyte Gulf to achieve operational surprise in counterattacks conceived and executed without the use of high level codes subject to interception. Both times we were caught flat-footed, victims of our own misguided arrogance of presumed full knowledge of enemy intentions.

American forces, though capable of operational maneuver, seldom demonstrated the flexibility and initiative necessary for consistent success. The lightning-paced operations of Patton's Third Army were a notable exception. Mobile armored and motorized infantry units were never concentrated in operational-sized formations that would have provided a capability similar to the Soviet tank armies employed on the Eastern Front from 1943 onward. Instead, U.S. armored divisions were paired with foot mobile infantry divisions to provide each corps a tactically mobile armored capability. Conversely, operational maneuver in the Pacific theatre was provided by an amphibious capability which allowed American planners to cut off and bypass Japanese garrisons throughout the Pacific in an island-hopping campaign that spanned thousands of miles of ocean.

The broad front strategy employed by General Eisenhower in the European theater precluded the creation of an operational sized reserve. As divisions deployed to the continent, they were committed immediately to combat. After breakout in the Cotentin

Peninsula in July 1944, the reserves available to Eisenhower never exceeded two or three divisions, and these were normally the airborne divisions retained in his strategic reserve. The lack of an operational reserve was to prove nearly catastrophic in the Battle of the Bulge when the opportunity to seal off the German penetration was missed because the only reserve divisions available were those pulled from quiet sectors of the front and redirected against the German advance.

Operational fires during World War II were provided by the Army Air Force using both tactical and strategic bombers and fighter bombers. Although considerable debate exists as to the effectiveness of the air campaign, German sources do not hesitate to point out the debilitating effect of American air power on the ability of Wehrmacht units to mass for counteroffensive action or move unimpeded throughout the theater.[25]

Although most of the elements of operational art were employed in World War II, their effectiveness was limited by the realities of coalition warfare and service parochialism which prevented the formation of truly joint, effective organizations. The relative abundance of operational sustainment and combat units available to planners apparently created a mindset in senior leaders that operational art was not dependent upon genius and vision as much as the capability to commit virtually unlimited resources to mission accomplishment. The early stages of the Korean War would demonstrate once again the importance of bold, visionary leadership to operational art.

IV. OPERATIONAL ART IN THE KOREAN WAR

Many of the bloody lessons learned by the American Army

quickly were forgotten in the rapid demobilization that followed the end of World War II. When war commenced on the Korean peninsula in June 1950, techniques and procedures previously mastered were painfully relearned at the hands of the North Korean and Chinese armies. At the conclusion of the war against Japan, General MacArthur was appointed Supreme Commander for the Allied Powers (SCAP) Japan and Commander-in-Chief, Far East Command. Remembering the lessons of the Southwest Pacific, MacArthur created the Joint Strategic Plans and Operations Group (JSPOG) in August 1949. This eight man body of Army, Navy, and Air Force officers was designed to assist and advise MacArthur in his capacity as CINC on joint matters pertaining to units under his command. The Korean War demonstrated that this arrangement was not totally successful. There was early conflict between the Air Force and the Navy on selection of targets in North Korea, as well as to which service should retain operational control of carrier-based aircraft strikes on inland targets. The results of the air campaign were less than satisfactory. "Lack of cooperation between the services produced in July (1950) a number of missions that were wasteful of time and equipment and, unhappily, lives, as a result of several air attacks on friendly forces."[26]

MacArthur delegated to his Chief of Staff, General Edward M. Almond, responsibility for fixing issues and establishing coordination between the three services. Ultimately this produced a more coordinated effort. But MacArthur did not hesitate to intervene directly, as when he told General Stratemeyer, Commander Far East Air Force (FEAF), to give priority to air strikes in front line areas to the exclusion of using FEAF bombers for

strategic raids or when he used B-29s to carpet bomb North Korean positions near Waegwan over the objections of the Air Force. MacArthur left no doubt as to who was in charge when he instructed General Stratemeyer to use B-29s "to strafe, if necessary," in order to halt the enemy advance.[27]

The advent of nuclear weapons had caused the Air Force to concentrate on its atomic mission while the glamor of aerial combat enticed pilots toward the fighter force, at the cost of neglecting the traditional air support role. Both the Eighth Army and Fifth Air Force had neglected to exercise air-ground coordination in the inter-war years.[28] The result was deficient air support operations in the early stages of the Korean war. MacArthur's recognition of this led in part to his intervention and decision to employ the B-29s in non-doctrinal, but tactically necessary, roles.

The command relationships established by MacArthur during the interwar years facilitated his execution as the joint operational commander in Korea. Although he remained distrustful of the Navy, MacArthur created an organization in Far East Command (FECOM) that functioned as a joint war-fighting headquarters.[29] It must be noted that the stature and reputation enjoyed by General MacArthur as the Hero of Bataan, Conquerer of the Philippines, and Supreme Commander for Allied Powers, Japan greatly facilitated his ability to command a multiservice force in the face of service parochialism and the absence of joint doctrine. In this instance the power of personality played a tremendous role in overcoming many impediments to operational level warfare.

Operational sustainment was an area that had been sorely neglected during the interwar years. Reserve stocks left over

from World War II saved the tactical situation in 1950 until procurement deliveries caught up with consumption early in 1951. The Chinese invasion in November 1950 caused the rearmament process to accelerate and the industrial base to expand at a greater rate. Without the cushion provided by the World War II stocks, American forces would have been unable to conduct offensive action as early as they did.[30] Competing requirements for supplies between Europe and Korea created a tug of war for resources that closely resembled the conflict of priorities between the Pacific and European theaters in World War II. In August 1950, the Japan Logistical Command was created to assume overall responsibility for the logistics effort. Headed by Major General Walter L. Weible, this organization enabled MacArthur to control all requisitioning and supply activities for both the Eighth Army and the Far East Command. Although operational sustainment suffered from the effects of "creeping mobilization", and shortages and delays continued throughout the prosecution of the war, MacArthur enjoyed an almost unprecedented degree of control over sustainment activities as the operational level commander.

Remembering well the operational maneuver capabilities afforded by amphibious operations, MacArthur ordered the planning and execution of Operation CHROMITE, the invasion of Inchon. Initial planning for this operation began as early as 2 July 1950, a few short days after the start of the North Korean attack on 25 June. Combined with the holding action by the Eighth Army in the Pusan perimeter, Inchon is a striking example of a major operation sequenced to attain strategic goals in a theater of

operation. Correctly identifying the North Korean People's Army as the center of gravity, MacArthur chose Inchon as the decisive point for its destruction. Within the space of a few short weeks, the brilliantly led invasion, well coordinated with a deception plan and supported by operational fires from the Air Force, completely turned the tide of the war against the North Koreans. Although MacArthur's luster as an operational level commander was tarnished severely by subsequent events (Chinese intervention in November 1950 and the retreat of the Eighth Army back to the 38th Parallel), his performance prior to that date provides a sterling example of superb operational level warfare. Succeeding commanders in that theater were never able to demonstrate operational genius similar to that displayed by the planner of the Inchon invasion. They either lacked operational vision or were limited in the flexibility allowed by higher headquarters.[31]

V. THE VIETNAM WAR AND LESSONS UNLEARNED

Much of the renewed interest in the study of the operational level of war stems from frustrations associated with our nation's involvement in Vietnam. During the twenty-five years of our Vietnam involvement, we failed to apply the lessons learned at great cost in World War II and Korea.

Enjoying superiority in nearly every category of force comparison, the United States was unable to apply that superiority in a series of campaigns and operations to attain clearly defined strategic goals. No single and coherent strategy emerged determining the appropriate level of force for each time and place of commitment that would match military means to political ends. Writing on the Vietnam War, Colonel Harry Summers observed that,

". . . we had adopted the strategy that focused on none of the possible North Vietnamese centers of gravity--their army, their capital, the army of their protector, the community of interest with their Allies, or public opinion."[32]

General William Westmoreland, Commander of the Military Assistance Command, Vietnam (MACV), sought to block the Ho Chi Minh Trail, the primary viaduct for men and material from North to South Vietnam. Such an operation would achieve several key objectives. First, the massive redeployment of the North Vietnamese Army (NVA) to the South could be halted. Second, U.S. forces, with their superior mobility and firepower, could engage and defeat the NVA in open warfare. Third, the air operations and naval blockade directed against North Vietnam, heretofore only intermittently effective, could complement the ground plan by isolating the battlefield. Finally, the South Vietnamese Army could coordinate with U.S. forces to destroy Viet Cong forces in the South now isolated from North Vietnanese Army regulars.[33] For reasons that remain unclear to this day, military leaders were either unwilling or unable to articulate such a strategy so as to win approval from political leaders for ultimate implementation. Colonel Summers commented upon our failure to apply our superiority when he described the failure of U.S. strategy: "one of the great ironies of the Vietnam War was that our technical ability to use the principles of Mass, Economy of Force, and Maneuver far exceeded that of the North Vietnamese."[34]

Unity of command, so critical to the direction of joint forces and the sequencing of major campaigns, was absent in the Vietnam War. Headquarters MACV worked for the Commander-in-Chief,

Pacific Command (CINCPACOM) located in Hawaii over 5,000 miles away. MACV tried to be the theater headquarters responsible for political and military issues as well as the military headquarters that provided direction for operational issues. The chain of command for U.S. forces was severely hindered by a higher headquarters (PACOM) that retained key decision-making authority thousands of miles distant from the controlling headquarters (MACV) responsible for all aspects of political and military operations in theatre.

Serving as commander, MACV from June 1964 to July 1968, General Westmoreland had only formal authority over the myriad of forces within his command. Except for Army forces, control remained with the respective service chiefs in Washington D.C. Although Vietnam was designated a "unified" command, all services remained on equal footing and not totally answerable to the unified commander. As noted by Edward Luttwak, "this is not, of course, a system that has ever been tried successfully in war by this or any other nation."[35] Virtually every branch of the Armed Forces, to include the Coast Guard, was given some type of role in the Vietnam War. Prior to 1968, the main threats in South Vietnam were guerrillas and terrorists. Following the Tet Offensive in 1968, North Vietnamese regulars comprised the primary Communist force. In each case not all U.S. forces designated to participate under MACV control were appropriate to the mission at hand or totally answerable to the theater of operations commander. For the duration of the war, the Army of the Republic of Vietnam (ARVN) remained outside the unified commander's control, further complicating unity of command in what was neither a combined nor a unified effort.

Air power in South Vietnam provides an excellent example of the lack of jointness at the operational level. For air strikes in South Vietnam, MACV delegated control to its air component, the 7th U.S. Air Force (USAF). For targets attacked in North Vietnam, CINCPAC (located in Hawaii) split responsibility on a geographic basis similar to the Korean War experience. Depending on the target's location in North Vietnam, it was either attacked by airplanes belonging to the aviation arm of the Pacific fleet or by the 7th USAF. If heavy bombers such as B-52s were required for tactical reasons, they were employed under the control of the Strategic Air Command rather than 7th USAF or PACOM. Coordination between the Air Force and Navy was extremely difficult due to different service doctrine, dissimilar operating procedures, and incompatible communications systems.[36]

Adequate intelligence, another critical ingredient of operational warfare, was not sufficient in South Vietnam. Although the theater commander should have controlled, or at least had access to, all intelligence assets that would have affected his operations, this was not the case. According to General Bruce Palmer, Jr., Deputy Commander to General Westmoreland, "unity of U.S. intelligence effort was not achieved in Vietnam and, despite coordination and cooperation between the CIA and the MACV J-2, undesirable duplication and competition did take place."[37]

As the war became increasingly unpopular at home, other tools of the operational art were denied to the theater commander. Although the United States possessed significant amphibious, airborne, and air mobile capability, operational level maneuver into North Vietnam and the neutral states of Laos and Cambodia was

never seriously considered as a part of the campaign plan after 1967. Deception, which must accompany such maneuver, was precluded for fear of antagonizing Red China or the Soviet Union. Accordingly, the U.S. could not even pretend it had intentions to conduct major cross-border operations.

The Vietnam War, more than any other struggle, highlighted the absolute necessity to reexamine the role of military theory and doctrine in the waging of war. More than one half million American soldiers supported by a substantial Air Force and the largest Navy in the world were dedicated to the Vietnamese War. The lack of a decisive outcome after twenty-five years of direct and indirect involvement revealed the inability of American political leadership to articulate clearly defined strategic objectives as well as military inability to achieve strategic goals through proper application of the operational art.

VI. OPERATIONAL LEVEL WARFARE--WHERE DO WE STAND NOW?

In 1921 the Joint Board of the Army and Navy set forth principles, policies, and procedures governing joint operations. It declared that operations would be coordinated either by "cooperation" or by "unity of command". Cooperation for joint operations depended upon the good will of the commanders concerned. The Joint Board felt that joint operations could be coordinated primarily on the basis of cooperation, and that unity of command would be required only when directed by the President or by joint agreement of the respective Service Secretaries. This doctrine remained in effect until 1945 when the wisdom of unity of command became stated policy.[30] The concept of jointness has evolved from an exceptional circumstance to the preferred method

of operation. However, although jointness is seen as desirable, in reality it is rarely achieved.

Each service has retained some functions duplicated to various degrees in the other services. Battlefield close air support, for example, is provided in various forms by attack helicopter battalions of the Army, organic fixed-wing attack squadrons of the Marine Expeditionary Force, and Tactical Air Command squadrons of the Air Force. Service components naturally are reluctant to relinquish the resources providing these functions within their own area. Within the command structure under the Joint Chiefs of Staff system, no binding mechanism exists to ensure organization of a joint command along functional lines rather than service component lines. Three services retain their own air arm: the Air Force, Navy, and Marines. Yet rarely will these three services operating within the same unified command, allow one functional commander to assume control of the aviation elements of all three services. The result is duplication of effort and failure to mass resources in an era when increasingly complex technologies have reduced the total numbers of systems that can be purchased and fielded.

The current JCS command structure provides for unified and specified organizations, theoretically designed to fulfill real world requirements. There is considerable reluctance when one service finds itself compelled to subordinate its elements to the command of another service in a joint environment.[39] This phenomenon surfaces most frequently with control of naval assets. Although most joint headquarters include substantial naval components, the Navy prefers to provide its elements "in support"

of the joint force commander rather than under his operational control. The translation of all this is that while naval elements work with the organization to which they are assigned, they remain under the control of a Navy chain of command.[40] This unique command relationship is indicative of the larger problem of service parochialism which prevents the proper functioning of truly joint organizations.

Overlapping command structures are a further impediment to joint forces capable of sequencing major campaigns and operations to achieve strategic goals. There are numerous areas and contingencies in the world where responsiblity for deployed forces is divided between several unified and service component commands. When ships and personnel deployed to the Persian Gulf in May 1987 to protect reflagged Kuwaiti tankers, the military command structure was split at least two ways. Navy ships operating within the confines of the Persian Gulf were accountable to the U.S. Central Command headquartered in Tampa, Florida. Carrier based aviation support, if required, was available from the carrier task groups located three to four hundred miles away in the Arabian Sea but commanded by Pacific Command (PACOM) in Hawaii.[41] Similarly, a poorly defined chain of command within the Marine landing team deployed to Lebanon in 1983 contributed to its destruction by a car bombing, resulting in 241 deaths.[42]

The first step in developing joint forces must be the writing and publication of joint doctrine. To be effective, the doctrine must govern techniques, procedures, and operations between service components. Currently, joint doctrine is being developed albeit on a relatively small scale. Each service continues to write the majority of its own doctrine, to include procedures for joint

operations. Currently the Services are tasked by the Department of Defense for the preparation of forces, not their subsequent operations under joint control. The result is doctrine that is generally not binding on sister services. The result has been that "doctrine for U.S. multi-service forces is so tied up in Service roles and missions that to date it has not been possible for the Joint Chiefs of Staff, who operation essentially as a committee, to write meaningful 'how-to-fight' guidance for multi-service forces--or even to set up a mechanism for the development of such doctrine as the best available thought . . . that can be defended by reason".[43]

Where joint doctrine does exist, such as in air-ground operations, it addresses only the highest levels of command and may not provide the necessary flexibility, responsiveness, and coordination needed in a fast moving operational campaign.[44]

The problem of operational sustainment presents a dual predicament for planners. Not only must logistics stocks be on hand or rapidly available from the mobilization base, they must be quickly deployable to the point of need. Traditionally, stockpiles are based on World War II-vintage combat usage factors that are thrown into doubt by recent combat experience of other nations. Ammunition was expended at a far greater rate than anticipated by the British in the invasion of the Falkland Islands in 1983, and major end items were consumed at a faster rate in the 1973 Yom Kippur War than previously thought possible. If adequate stocks are not readily available, then the mobilization base must compensate for any equipment shortfall expeditiously. Although the United States has maintained key elements of its mobilization capability in stand-by status since the Korean War, the increasing complexity of modern implements of war and their corresponding low rates of industrial production create serious doubt about whether

our current mobilization system can provide adequate resupply in time of crisis.

Even if adequate stockpiles existed in the United States, our armed forces lack adequate air and sea lift to transport them. Several force projection enhancements have occurred during the Reagan Administration. Enough equipment and supplies have been positioned worldwide to equip and sustain three Marine Expeditionary Brigades. Air lift capability has been increased to 39.6 million-ton-miles per day (MTM/D). Our Military Sealift Command Fleet has been increased to 57 ships in the active component, and 82 ships in the Ready Reserve Fleet. Such enhancements, however, still leave us at only 60% of our goal of 66 MTM/D airlift capability and 85% of our sealift requirements.[45] Possible contingency areas in the Persian Gulf, Europe, and Korea require lengthy sea lines of communication which must be protected from interdiction by potential adversaries who employ large numbers of submarines and cruise missile-equipped bombers for sea denial missions. Inadequate air and sealift capability, as well as increasingly vulnerable sea lines of communication will restrain the flexibility of the operational commander.

Each service has retained responsibility for its logistics support. Within each service, the majority is provided by units from the Reserve Component structure. Seventy-one percent of the combat service support structure for the 28 division Army force is provided by the Reserve Component. Reserve units also provide 67% of the non-divisional combat and combat support structure, and 43% of all maneuver divisions (including round out brigades for the active divisions).[46] As currently manned and equipped, these

Reserve Component units lack the ability to sustain themselves and to communicate and move over anticipated operational distances.[47] The Marine Corps fields three Marine Expeditionary Forces which, once deployed on land, are totally dependent upon seaborne logistics and the operating range of the CH-53 helicopter. Although the Marines provide three active and one reserve component divisions, the sustainment limitations inherent in their force structure will further inhibit the operational commander.

Operational level deception capabilities are not fully developed. Although platoon-sized tactical deception units have been reintroduced into Active Component units, operational deception requires greater sophistication in concealing intent rather than capability. This aim requires cooperation from and access to the various agencies of the intelligence establishment (e.g. CIA, DIA, NSA) who collect and maintain compartmentalized information. Current procedures, security requirements, and parochial organizational concerns still inhibit efficient operations.

The ability to conduct operational level maneuver with current force structure is limited. Amphibious operations are limited to a fraction of the scale seen during World War II by sea lift that will accommodate only one maneuver brigade per Marine division. Ground force vehicles lack sufficient cruising range due to excessive fuel consumption. Lack of mechanical simplicity, which in turn necessitates substantial logistical support, further inhibits flexibility. The air defense and intelligence systems that support the ground maneuver elements still emphasize relatively shallow and static coverage, and are not prepared either by doctrine or equipment for large scale

mobile operations.[48] Additionally, sophisticated air defense systems will preclude the employment of airborne units on the scale seen during Operations OVERLORD or MARKET-GARDEN.

Depending on the scale and location of commitment, active component forces may be sufficient for the creation of an operational level reserve. Current planning contingencies require units based in the continental United States (CONUS) to plan for multiple contingencies. If simultaneous crises occur, the availability of operational reserves will depend on how quickly reserve component units with limited training and second-rate equipment can be mobilized and deployed to the crisis area.

The delivery of operational fires throughout the battlefield, (previously the responsibility of the Air Force beyond the Fire Support Coordination Line), can no longer be guaranteed in an age where sophisticated air defense systems can inflict heavy losses upon manned platforms. Although improved missile systems such as ATACMS and I-LANCE are being developed, manned aircraft are still necessary for the delivery of smart (and increasingly "brillant") sub-munitions to operational depths. Cruise missiles could provide an effective alternative, but the most promising systems (those with a range between 500-3000 kilometers) will be eliminated by the impending Intermediate-range Nuclear Force (INF) Treaty. Stealth technology provides a viable means to penetrate extensive air defense networks, but its high unit cost will preclude the procurement in sufficient numbers for the delivery of massed operational fires.

Leadership, one of the most critical requirements for operational level warfare, has been emphasized and developed by

all Services. Auftragstaktik, or the use of mission-type orders, is regaining ascendancy in the military that was once severely debilitated by the command climate of the Vietnam War. Training initiatives such as the National Training Center, the Joint Readiness Operations Training Center, and the Combat Maneuver Training Center stress small unit leadership and create highly capable tactical units essential to operational success. Larger unit operations are exercised by simulations such as the Warrior Preparation Center and the Battle Command Training Program. Some limitations, however, remain. Field exercises for larger units are extremely costly and consequently limited. Large scale maneuvers are constrained by the unavailability of sufficient train ng area to replicate operational level distances. The ability to synchronize large joint forces is still hindered by the absence of adequate joint doctrine. But, despite these shortcomings, leadership preparation for operational level warfare appears to be on the right track.

VII. WHAT NEEDS TO BE FIXED AND HOW SHOULD IT BE DONE?

Combat experience since 1941 indicates our nation's military has understood and applied operational art with mixed results. In World War II we enjoyed the benefits of protected shores and adequate time to mobilize our vast resources. Despite these advantages, operational level warfare was limited by the realities of coalition warfare and by service parochialism. In Korea, an operational artist was able to override bureaucratic concerns and achieve significant results with fewer resources, albeit for a limited time. The Vietnam War demonstrated that costly lessons previously learned could be ignored and considerable lives and

resources squandered. Based upon recent experience, future combat will be extremely intense and costly in technologically complex and expensive systems, as well as the lives of our soldiers. As Colonel Richard Swain recently noted about AirLand Battle, thought by many to be identical to operational art, it is "a complex doctrine predicated on the assumption that crisp, disciplined execution will allow a smaller force to defeat a larger enemy.... Crisp, disciplined execution will depend heavily on intelligent conduct of command at all levels."[49] For these reasons, we must be proficient operational artists. Preparation for combat will require resource expenditures and significant adjustments in how our military performs its missions.

The greatest challenge for U.S. armed forces lies in assuming a truly joint posture. As long as each service receives its own budget from Congress there will never be any incentive to eliminate duplication of effort or unnecessary force structuring. Until the Chairman of the Joint Chiefs of Staff receives greater military authority over committed forces, bureaucratic in-fighting will continue over command relationships and hinder military efficiency. These are the conclusions reached by the President's Blue Ribbon Commission on Defense Management (better known as the Packard Commission, after its senior member, David Packard). In its final report to the President, it stated "that there is a great need for improvement in the way we think through and tie together our security objectives, what we spend to achieve them, and what we decide to buy."[50]

Recommended changes start with the President providing 5 year provisional levels to the Department of Defense. The Joint

Chiefs, under the direction of the Secretary of Defense, would prepare military strategy for national objectives and options on operational concepts and key defense issues for budget levels proposed by the President. The Commission also proposed specific modifications in the role of the nation's senior military advisor. The Chairman of the JCS would be tasked to address modernization, force structure, readiness, sustainability, and strategic versus general purpose forces, and to frame explicit tradeoffs among the armed forces. These tradeoffs would be submitted to the Secretary of Defense for decision and implementation. The Joint Chiefs also would make a net assessment of the effectiveness of U.S. and Allied forces in comparison with potential adversaries in order to evaluate proposed risks and options.[81] The procedures suggested by the Packard Commission would allow the hard bureaucratic decisions to be made in which duplication of effort could be eliminated and greater power concentrated in the Joint Chiefs of Staff and its Chairman.

But the Packard Commission did not go far enough. To assist the Chairman in his new responsibilities, a true "General Staff" is needed. This body of officers must be drawn from the most capable and experienced leaders of the four services, and be relieved from any service-peculiar bias. The resulting National Defense Staff would be responsible for providing unbiased advice to the JCS and National Command Authority and implementing the types of procedural reform recommended by the Packard Commission.[82] The end result of these initiatives would be four unified services resourced and directed in accordance with national security concerns and working in unison to implement military policy. Once the major hurdle of jointness can be

overcome, improving the other components of the operational level of warfare becomes comparatively easy as resources and effort are reprogrammed as required, devoid of service parochialism, and in the best interests of the strategic policy of the United States.

Improving logistic sustainability will involve some traumatic decisions for the Services. As described earlier, the services (the Army, in particular) are heavily dependent upon the reserve components to provide logistical support for the active component. To avoid a repetition of the "hollow army" lamented by General E.C. Meyer during his tenure as Army Chief of Staff, sufficient active Army combat units should be disbanded and converted into combat service support units so as to provide enough logistical support for the active component force. This approach would be extremely beneficial to U.S. Army, Europe which relies heavily on early augmentation by reserve logistical units. One or two of the Army's light divisions, which have great strategic mobility but limited operational utility, would be excellent candidates for conversion. A similar conversion must occur with the Marine Corps which fields three formidable divisions that are limited operationally to the proximity of their beachheads. If sufficient manpower spaces cannot be found within the end strength of the Corps to field combat service support units that facilitate operations well inland, then combat units should be converted to the support mission. Twenty-one Army and Marine Corps divisions in the active component are indeed a "hollow force" if they cannot sustain themselves without massive reserve component augmentation.

Deployability is an important component of sustainability and also will require improvement. Despite recent improvements, the

Navy has insufficient sea lift to transport active Army force structure. As recently stated by the Commander, Military Sealift Command, "I think we have come from a position where we were grossly inadequate to a point where today we're marginally inadequate."[53] Only eight SL-7 fast cargo ships exist in the inventory with the combined capacity to transport one heavy division. An operational-sized reserve for most planning contingencies would consist of 3-5 divisions, necessitating enough fast sea lift to transport it simultaneously.

Recent developments in Soviet submarine technology have called into doubt the Navy's ability to protect sea lines of communication.[54] Yet, when faced with the decision to eliminate force structure because of budget cuts ordered by Secretary of Defense Carlucci, the Navy retired 15 frigates used primarily for Anti-Submarine-Warfare (ASW). Such decisions are perplexing when viewed in light of the Navy's ASW capability shortfall. Clearly, the Navy must reprogram funds to improve its strategic sealift and ASW capabilities so that ground forces can be deployed and sustained in accordance with national strategy.

Reorganization of the reserve component structure is necessary if an operational-sized reserve is to be available despite the overcommitment of active forces. The reserves currently provide 10 divisions equipped with second-rate equipment, inadequate training, and various levels of manning. These units would not be readily available, nor tactically useful, to an operational commander in a short-warning, mid-to-high intensity scenario. One approach would be to concentrate personnel recruiting, federal funding, equipment procurement, and training resources on five or six divisions, with the remaining

Reserve divisions relegated to a cadre status and rebuilt only after extended mobilization. This would provide fewer but more capable divisions available for earlier employment.

Better integration of the reserves into the active component is another option. In the Bundeswehr, each maneuver brigade consists of three active army and one reserve component battalions. The reserve unit is maintained at cadre strength and fleshed out by reservists at mobilization. With equipment that is maintained by active army soldiers, the battalion is expected to be fully combat ready within 96 hours after mobilization.[88] Still other units in the German Army, such as the HeimatSchutzBrigaden (Home Defense Brigades), are maintained at levels of 60-65% active component strength and are available for front line employment almost immediately. Similar solutions could be employed in the U.S. Army, thereby allowing force structure to be preserved while active Army soldiers were made available to form critical combat service support units or enhance the readiness of selected National Guard divisions.

Operational intelligence and deception can be improved by organizational and procedural changes that will force the myriad of intelligence agencies to work together to provide the operational commander with the information he needs. The fielding of equipment that processes, analyzes, and disseminates information-- such as the Army Data Distribution System, the Joint Surveillance and Target Attack Radar System, Maneuver Control System, and All Source Analysis System-- should be accelerated.

The impact of operational fires will be enhanced by exploiting technology provided by smart and brilliant

submunitions. Systems such as ATACMS and the LANCE follow-on should be fielded as a replacement for highly vulnerable and increasingly expensive close air support platforms. Systems must be developed that will cover the battlefield to the 500 kilometer range limitation allowed by the INF Treaty.

Finally, the resurgence of interest in the operational level of war, and the leadership traits and preparation that make it possible, should be nurtured and institutionalized. The founding of the School for Advanced Military Studies is a step in the right direction, but action is needed at the highest levels of the military. When U.S. Grant maneuvered Sigel's Army of West Virginia, Meade's Army of the Potomac, and Butler's Army of the James during the 1864 Virginia Campaign, he was considered by many to be America's first operational artist.[86] Even earlier, his Vicksburg campaign in the Spring of 1863 demonstrated a clear understanding of operational art: large scale deception provided by the cavalry raid of Col. Benjamin Grierson, operational maneuver by the corps of Sherman and McClernand to defeat Confederate reinforcements, and total integration of Navy gunboats and transports commanded by Admiral Porter into the campaign plan.[87] Although similar genius existed in the Union Armies of the period, Grant was the first general to overcome bureaucratic concerns through unity of command and focus on the objective. His tenacity of purpose and organizational genius allowed the North to revamp its methods of warfare and achieve victory in the Civil War. Likewise, the U.S. military must discard the "business as usual" approach and revamp its approach to operational level warfare if it is to become a truly joint, operationally proficient force capable of protecting the nation into the next century.

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52. Luttwak, pp. 268-276. Although Luttwak uses the term "National Defense Staff", many writers have indicated the need for a General Staff that provides options and recommendations to the National Command Authority regardless of Service considerations or bureaucratic concerns.

53. Glenn W. Goodman, Jr. and Scott C. Truver, "Interview with V. Adm. Walter T. Piotti," Armed Forces Journal International, (July 1987), p. 52.

54. Scott C. Truver, "Running Critical: ASW Programs Under Fire," Armed Forces Journal International, (April 1988), p. 46.

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56. James J. Schneider, The Theory of Operational Art (Fort Leavenworth: U.S. Army Command and General Staff College, 1988), p. 15.

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